REMARKS

Traversal and Request for Withdrawal

The restriction requirement of November 16, 2006 is the second restriction requirement arising from the original application filed October 31, 2003. This second restriction requirement indicates that the claims under consideration include multiple species beyond the initial restriction requirement.

According to PTO rules, every proper restriction requirement has two aspects:

(A) the reasons (as distinguished from the mere statement of conclusion) why each invention as claimed is either independent or distinct from the other(s); and

(B) the reasons why there would be a serious burden on the examiner if restriction is not required, i.e., the reasons for insisting upon restriction.[1]

The particular reasons relied on by the examiner for holding that the inventions as claimed are either independent or distinct should be concisely stated. A mere statement of conclusion is inadequate; the reasons upon which the conclusion is based should be given.[2] Each relationship of claimed inventions should be similarly treated and the reasons for the conclusions of distinctness or independence set forth.[3]

If the restriction requirement is based upon a perceived lack of relationship between species, they are independent inventions. A requirement for restriction is permissible if:

(A) there is a patentable difference between the species as claimed; and

(B) there would be a serious burden on the examiner if restriction is not required.[4]

Where there is a relationship disclosed between species, such disclosed relation must be discussed and reasons advanced leading to the conclusion that the disclosed

1 MPEP 808.
2 MPEP 808.01.
3 MPEP 808.01.
4 MPEP 808.01(a).

relation does not prevent restriction to establish the propriety of restriction.[5] In applications where only generic claims are presented, restriction cannot be required unless the generic claims recite such a multiplicity of species that an unduly extensive and burdensome search would be necessary to search the entire scope of the claim.[6]

Where the related inventions as claimed are shown to be independent or distinct, the examiner, to establish reasons for insisting upon restriction, must explain why there would be a serious burden on the examiner if restriction is not required. Thus the examiner must show by appropriate explanation one of the following:

(A) Separate classification thereof: Examiner must show that each invention has attained recognition in the art as a separate subject for inventive effort, and also a separate field of search. Examiner need not cite patents to show separate classification.

(B) A separate status in the art when they are classifiable together: Examiner must show that even though they are classified together, each invention can be shown to have formed a separate subject for inventive effort. The examiner must show a recognition of separate inventive effort by inventors. Examiner may show separate status in the art by citing patents which are evidence of such separate status, and may also show of a separate field of search.

(C) A different field of search: Examiner must show that it is necessary to search for one of the inventions in a manner that is not likely to result in finding art pertinent to the other invention(s) (e.g., searching different classes/subclasses or electronic resources, or employing different search queries a different field of search is shown, even though the two are classified together). Examiner must show that the indicated different field of search must in fact be pertinent to the type of subject matter covered by the claims. Examiner need not cite patents to show different fields of search.[7]

In the present case, the applicant respectfully submits that the office action of November 16, 2005, fails to establish grounds for restriction as required. The office action simply describes the perceived species and the conclusory statement that the

5 MPEP 808.01(a).
6 MPEP 808.01(a).
7 *See* MPEP 808.02.

species are "patentably distinct". As noted above, however, this is inadequate to support the restriction requirement. The office action must set forth:

- the particular reasons relied on by the examiner for holding that the inventions as claimed are either independent or distinct for each relationship of claimed inventions;
- a discussion of relationships disclosed between species and reasons advanced leading to the conclusion that the disclosed relation does not prevent restriction; and
- an explanation why there would be a serious burden on the examiner if restriction is not required.

The office action fulfills none of these requirements. Without fulfilling these specific requirements, the restriction requirement is improper. Accordingly, the applicant respectfully submits that the restriction requirement should be withdrawn.

Applicant further respectfully submits that, even if the office action had included adequate discussion of the requirements to support the restriction, the restriction requirement would be improper in that it improperly classifies as species groups of claims which are not properly defined as species. On this basis, applicant respectfully requests that the restriction requirement be withdrawn.

The MPEP defines the concept of "species" as specifically different disclosed embodiments of an invention.[8] On the topic of restriction between species, the MPEP states that where two or more species are claimed, a requirement for restriction to a single species may be proper if the species are mutually exclusive. Claims to different species are mutually exclusive if one claim recites limitations disclosed for a first species but not a second, while a second claim recites limitations disclosed only for the second species and not the first. Mutual exclusivity is also expressed in the MPEP as follows: "to require restriction between claims limited to species, the claims must not overlap in scope."[9]

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[8] MPEP 806.04(e).
[9] MPEP 806.04(f).

Analyzing the claims as grouped in the restriction requirement in view of the requirements for mutual exclusivity as mandated by the MPEP, the groupings described in the office action as Species A-E are not valid by the terms of the MPEP.

Comparing Species A with Species B, chemical vapor deposition is the chemical process by which films are formed on a surface. Depending on the parameters of the deposition process, the films may be designed for a specified thickness and may comprise substantially solid cross sections consisting of substantially solid material or substantially porous cross sections consisting of substantially porous material, and combinations thereof. By varying the parameters of the deposition process, one may fill a pattern with a substantially porous material using chemical vapor deposition. As such, Species A and Species B are not mutually exclusive.

Comparing Species A with Species C, much of the analysis comparing Species A with Species B is applicable here. Specifically, because it is possible to form porous materials using chemical vapor deposition, Species A and Species C are not mutually exclusive. In addition, because chemical vapor deposition commonly involves the introduction of a precursor to dissolve a portion of the substrate, pores may be formed in employing chemical vapor deposition when the process is applied to an existing material.

Comparing Species A with Species D, as stated above, chemical vapor deposition may be employed to fill a pattern by forming a single structure comprised of material formed by that process. As such, Species A and Species D are not mutually exclusive.

Comparing Species A with Species E, as stated above, chemical vapor deposition may be employed to fill a pattern with material. If this process is designed to produce material beyond the point at which the pattern is filled, chemical vapor deposition may also be used to fill a pattern with material such that the pattern is overfilled. As such, Species A and Species E are not mutually exclusive.

Comparing Species B with Species C, one may form additional pores in an already substantially porous device produced by filling a pattern with porous material. It may be desirable to do so for purposes such as concentrating fluids saturating the material

in certain regions of the resulting device. As such, Species B and Species C are not mutually exclusive.

Comparing Species B with Species D, one may form multiple layers of a single material within a pattern. For example, one layer of molten metal may be injected and cooled. After the first layer of molten metal has solidified, a second layer of the same metal may be injected to form a second layer of the same material. These layers will be distinguishable under a cross sectional analysis as defined by a boundary region between the two layers. The same procedure may be applied to produce multi-layer substantially porous materials. As such, Species B and Species D are not mutually exclusive.

Comparing Species B with Species E, by definition, to be overfilled a pattern must first be filled. As such, Species B and Species E are not mutually exclusive.

Comparing Species C with Species D, one may form pores in a material following removal of the material from the pattern. This formation of pores may be carried out for any number of reasons including to allow for saturation of fluid in a particular region of the material. As such, Species C and Species D are not mutually exclusive.

Comparing Species C with Species E, the device brought about through a process of overfilling a pattern may be modified to produce pores. As such, Species C and Species E are not mutually exclusive.

Comparing Species D with Species E, one may form a device by providing a first layer of material and then providing a second layer of material wherein one overfills the pattern while providing the second layer of material. As such, Species D and Species E are not mutually exclusive.

For all of the above reasons, applicant submits that the restriction requirement is improper in that it improperly describes as species groups of claims that are not mutually exclusive. As such, applicant requests that the restriction requirement be withdrawn. Applicant notes that nothing above should be construed to limit the scope of any claim in any way.

Provisional Election

The applicant provisionally elects species C as identified in the office action. Claims 1-5, 7-10, 13-15, 52-56, 58-61, and 64-66 read on the elected species. This provisional election is made without prejudice to or disclaimer of the other claims or inventions disclosed.

CONCLUSION

Withdrawal of the restriction requirement and consideration and allowance of all pending claims are respectfully requested. If there are any questions or concerns, please contact the undersigned at the telephone number indicated below.

Respectfully submitted,

Date: February 16, 2006

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